Simple leads to complex solutions

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DESCRIPTION

A 76-year-old woman on warfarin for atrial fibrillation presented for routine pacing check 6 weeks after implantation of a dual-chamber device. She felt weak and generally unwell. The atrial lead was not sensing or pacing at high outputs. A chest X-ray showed the lead had perforated the atrial wall (figure 1). Echocardiography showed no pericardial effusion. International normalised ratio was 2.4.

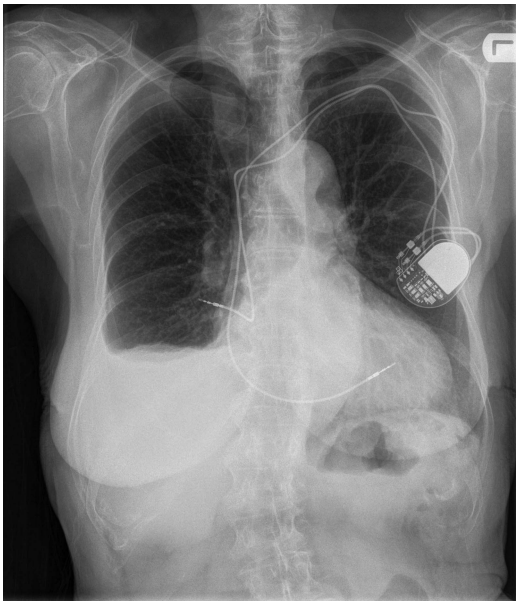

Figure 1 Chest radiograph 6 weeks after device implantation showing the atrial lead has perforated the atrial wall.

In light of these findings, urgent lead revision was planned in a centre with cardiothoracic facilities due to the increased risk of pericardial effusion and tamponade.

Although pacemaker malfunction can be complex, simple non-specialist investigations can elucidate causes and majorly impact management.

Learning points

- Simple, systematic investigation of unwell patients (with cardiac devices) before specialist input can majorly inform and impact management.
- Delayed lead perforation is defined as lead perforation more than 30 days after implantation and has a reported incidence of 0.8%.[1]
- Although many cases of lead perforation may be asymptomatic,[1] prompt recognition (facilitated by simple investigation) may prevent resultant pericardial effusion, tamponade and fistulae.[1]

Competing interests None.

Patient consent Obtained.

Provenance and peer review Not commissioned; externally peer reviewed.

REFERENCE

1 Khoueiry G, Lakhani M, Abi Rafeh N, *et al*. Right coronary artery fistula as a result of delayed right atrial perforation by a passive fixation lead. *Circ Arrhythm Electrophysiol* 2012;5:e46–7.

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